INFORMATION DISCLOSURE CITATION (Use several sheets if necessary)	Docket Number (Optional) TWI-11220	Application Number 10/691,132
	Applicant(s) Jon Opsal et al.	
	Filing Date October 22, 2003	Group Art Unit ~~Unknown~~ 2877

U.S. PATENT DOCUMENTS

*Examiner Initial	Ref	Document Number	Date	Name	Class	Subclass	Filing Date

FOREIGN PATENT DOCUMENTS

	Ref	Document Number	Date	Country	Class	Subclass	Translation Yes	Translation No
	AT	WO 99/10747	01/14/1999	PCT	G01N	21/17		
	AU	WO 00/68656	11/16/2000	PCT	G01J	4/00		

OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages, Etc.)

	AV	M. Fried et al., "Nondestructive determination of damage depth profiles in ion-implanted semiconductors by spectroscopic ellipsometry using different optical models," *J. Appl. Phys.*, Vol. 71, No. 6, 15 March 1992, pp. 2835-2843.
	AW	A.P. Webb et al., "Refractive index profiles induced by ion implantation into silica," *J. Phys. D: Appl. Phys.*, Vol. 9, 1976, pp. 1343-1354.
	AX	J.R. Adams, "Complex refractive index and phosphorus concentration profiles in P31 ion implanted silicon by ellipsometry and auger electron spectroscopy," *Surface Science*, Vol. 56, 1976, pp. 307-315.
	AY	J.R. Adams et al., "Determination of the complex refractive index profiles in P31 ion implanted silicon by ellipsometry," *Surface Science*, Vol. 49, 1975, pp. 441-458.
	AZ	J.P. Cortot et al., "Analysis of arsenic and phosphorus ion implanted silicon by spectroscopic ellipsometry," *Appl. Phys. Lett.*, Vol. 41, No. 1, 1 July 1982, pp. 93-95.
	BA	X-F. He et al., "Disorder effects on optical spectra and band structure of Si induced by ion implantation," *J. Appl. Phys.*, Vol. 66, No. 11, 1 December 1989, pp. 5261-5266.
	BB	T. Yamaguchi et al., "Empirical dielectric function of amorphous materials for spectroscopic ellipsometry," *J. Appl. Phys.*, Vol. 77, No. 9, 1 May 1995, pp. 4673-4676.
	BC	Kravetsky, Kulyuk et al., "Reflected optical second harmonic generation as a method for caractereization of ion-implanted, thermal annealed silicon surfaces and silicon-insulator interfaces," *Ion Implanted Technology*, Vol. 94, 1995, pp. 656-659.
	BD	D.E. Aspnes et al., "Dielectric properties of heavily doped crystalline and amorphous silicon from 1.5 to 6.0 eV," *Physical Review B*, Vol. 29, No. 2, 15 January 1984, pp. 768-779.
	BE	Y. Takeda et al., "Large third-order optical nonlinearity of tin microcrystallite-doped silica glass formed by ion implantation," *Appl. Phys. Lett.*, Vol. 63, No. 25, 20 December 1993, pp. 3420-3422.
	BF	J.M.C. England et al., "The dynamics of amorphous-to-crystalline interface evolution in ion-implanted polycrystalline silicon," *J. Appl. Phys.*, Vol. 73, No. 9, 1 May 1993, pp. 4332-4343.
	BG	E. Chason et al., "In situ energy dispersive x□ray reflectivity measurements of H ion bombardment on SiO2/Si and Si," *Appl. Phys. Lett.*, Vol. 60, No. 19, 11 May 1992, pp. 2353-2355.
	BH	Y.Z. Hu et al., "A Comparison of Argon and Hydrogen Ion Etching and Damage in the Si-SiO2 System," *J. Electrochem. Soc.*, Vol. 139, No. 7, July 1992, pp. 2022-2026.
	BI	R.E. Hummel et al., "Ion Implantation Damage and Annealing of Silicon as Characterized by Differential Reflectometry," *J. Electrochem. Soc.*, Vol. 137, No. 11, November 1990, pp. 3583-3588.
	BJ	N.V. Nguyen et al., "Spectroscopic ellipsometry studies of crystalline silicon implanted with carbon ions," *J. Appl. Phys.*, Vol. 67, No. 8, 15 April 1990, pp. 3555-3559.
	BK	G.F. Feng et al., "Optical properties of ion-implanted GaAs: The observation of finite-size effects in GaAs microcrystals," *Physical Review B*, Vol. 40, No. 2, 15 July 1989, pp. 1064-1073.

Examiner	Date Considered 19 JAN. 2005

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FOREIGN PATENT DOCUMENTS

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OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages, Etc.)

	BL	L. Chen et al., "Transient photomodulation spectroscopy of nanocrystalline hydrogenated silicon," *Physical Review B*, Vol. 39, No. 8, 15 March 1989, pp. 5121-5127.
	BM	A.H.M. Holtslag et al., "Noble-gas ion barbardment on clean silicon surfaces," *Physical Review B*, Vol. 38, No. 15, 15 November 1988, pp. 10556-10570.
	BN	R.E. Hummel et al., "Optical investigations of ion implant damage in silicon," *J. Appl. Phys.*, Vol. 63, No. 8, 15 April 1988, pp. 2591-2594.
	BO	J.L. Buckner et al., "Ellipsometric and Rutherford backscattering characterization of low-energy hydrogen-, helium-, neon-, and argon-bombarded silicon," *J. Appl. Phys.*, Vol. 63, No. 11, 1 June 1988, pp. 5288-5294.
	BP	J. Narayan et al., "Formation and nondestructive characterization of ion implanted silicon-on-insulator layers," *Appl. Phys. Lett.*, Vol. 51, No. 5, 3 August 1987, pp. 343-345.
	BQ	P.J. McMarr et al., "Spectroscopic ellipsometry: A new tool for nondestructive depth profiling and characterization of interfaces," *J. Appl. Phys.*, Vol. 59, No. 3, 1 February 1986, pp. 694-701.
	BR	X.C. Mu et al., "Ar ion beam and CCl4 reactive ion etching: A comparison of etching damage and of damage passivation by hydrogen," *J. Appl. Phys.*, Vol. 58, No. 11, 1 December 1985, pp. 4282-4291.
	BS	R.W. Collins et al., "A ellipsometry study of a hydrogenated amorphous silicon based n-i structure," *J. Appl. Phys.*, Vol. 57, No. 10, 15 May 1985, pp. 4566-4571.
	BT	K. Vedam et al., "Nondestructive depth profiling by spectroscopic ellipsometry," *Appl. Phys. Lett.*, Vol. 47, No. 4, 15 August 1985, pp. 339-341.
	BU	M. Erman et al., "Analysis of ion-implanted GaAs by Spectroscopic ellipsometry," *Surface Science*, Vol. 135, 1983, pp. 353-373.
	BV	J.B. Theeten et al., "Depth profiling and interface analysis using spectroscopic ellipsometry," *J. Vac. Sci. Technol.*, Vol. 20, No. 3, March 1982, pp. 471-475.
	BW	J.T. Lue et al., "The wavelength modulation spectrum of ion-implanted silicon," *J. Appl. Phys.*, Vol. 53, No. 8, August 1982, pp. 5617-5620.
	BX	D.E. Aspnes et al., "Direct Determination of Sizes of Excitations from Optical Measurements on Ion-Implanted GaAs," *Physical Review Letters*, Vol. 48, No. 26, 28 June 1982, pp. 1863-1866.
	BY	Q. Kim & Y.S. Park, "Ellipsometric investigation of ion-implanted GaAs," *Surface Science*, Vol. 96, 1980, pp. 307-318.
	BZ	Q. Kim et al., "Characterization of ion-implanted GaAs by ellipsometry," *J. Appl. Phys.*, Vol. 51, No. 4, April 1980, pp. 2024-2029.
	CA	D.E. Aspnes et al., "An investigation of ion-bombarded and annealed (111) surfaces of Ge by spectroscopic ellipsometry," *Surface Science*, Vol. 96, 1980, pp. 294-306.
	CB	V.M. Gusev et al., "Interference method for measuring the effective thickness of ion-implated layers," *Soviet Physics – Semiconductors*, Vol. 5, No. 5, November 1971, pp. 737-739.

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OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages, Etc.)

	CC	V.V. Galkin et al., "Implantation of 10-80 keV lithium ions in diamond," *Soviet Physics – Semiconductors*, Vol. 4, No. 5, November 1970, pp. 709-716.
	CD	V.V. Galkin et al., "Ion-bombardment induced damage in diamond layers, *Soviet Physics - Solid State*, Vol. 10, No. 3, September 1968, pp. 706-708.
	CE	J.M. Leng et al., "Simultaneous measurement of six layers in a silicon on insulator film stack using spectrophotometry and beam profile reflectometry," *J. Appl. Phys.*, Vol. 81, No. 8, 15 April 1997, pp. 3570-3578.
	CF	U Zammit et al., "Optical absorption in ion implanted Si films," *Nuclear Instruments and Methods in Physics Research B*, Vol. 96, 1995, pp. 241-244.
	CG	A. Rosencwaig et al., "Thermal wave characterization of semiconductors and superconductors," *Review of Progress in Quantitative Nondestructive Evaluation*, Vol 8B, 1989, pp. 1195-1201.
	CH	J. Opsal, "Modulated interference effects and thermal wave monitoring of high-dose ion implantation in semiconductors," *Review of Progress in Quantitative Nondestructive Evaluation*, Vol 8B, 1989, pp. 1241-1245.
	CI	J. Bailey et al., "Subsurface defects in silicon investigated by modulated optical reflectance measurements," *Review of Progress in Quantitative Nondestructive Evaluation*, Vol 8B, 1989, pp. 1263-1271.
	CJ	S. Lynch et al., "Non-destructive depth profiling of silicon ion implantation induced damage in silicon (100) substrates," *Thin Solid Films*, Vol. 233, 1993, pp. 199-202.
	CK	I. Kasko et al., "Characterization of thin $TiSi_2$ films by spectroscopic ellipsometry and thermal wave analysis,"*Microelectronic Engineering*, Vol. 37, No. 38, 1997, pp. 455-460.

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